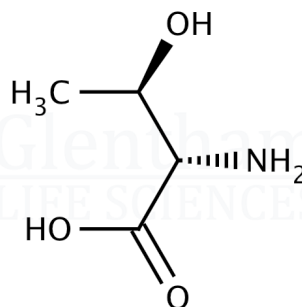


## Product Specification

Product Name	L-Threonine
Glentham Code	GM4509
CAS Number	72-19-5
EINECS	200-774-1
MDL Number	MFCD00064270
PubChem SID	310280944
Molecular Weight	119.12
Molecular Formula	C <sub>4</sub> H <sub>9</sub> NO <sub>3</sub>
Storage Temp.	+20°C



Property	Specification
Physical Description	White or almost white crystalline powder or flakes
Assay	99.0 - 101.0 %
Chloride (Cl)	≤ 0.02%
Ammonium (NH <sub>4</sub> )	≤ 0.02%
Sulphate (SO <sub>4</sub> )	≤ 0.02%
Iron (Fe)	≤ 10ppm
Heavy Metals	≤ 10ppm
Arsenic (As <sub>2</sub> O <sub>3</sub> )	≤ 1ppm
Loss on Drying	≤ 0.2%
pH	EP, USP: 5.0 - 6.5, AJI: 5.2 - 6.2
Specific Optical Rotation	EP, AJI: -29.0 to -27.6 °, USP: -29.1 to -26.7 °
Lead (Pb)	≤ 3ppm
Mercury (Hg)	≤ 0.1ppm
Cadmium (Cd)	≤ 1ppm
Any Individual Impurity	≤ 0.5%
Total Impurities	≤ 2.0%
Residue on Ignition	≤ 0.10%
Pharmacopoeia Specification(s)	Conforms to EP, USP, AJI

Specification Version	-	v1.0
Date Created	-	2014-05-13

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glentham.com](http://www.glentham.com) or contact us using the details above for the current version of this document.

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